

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.

Application Serial Number: 10/805,684  
Source: IFW0  
Date Processed by STIC: 10/29/04

# ***ENTERED***



IFWO

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/805,684

DATE: 10/29/2004

TIME: 08:17:00

Input Set : D:\58770342.app

Output Set: N:\CRF4\10292004\J805684.raw

3 <110> APPLICANT: SAKAMOTO, TAKESHI  
 4 TAKEDA, SHIZU  
 6 <120> TITLE OF INVENTION: FHOS-INTERACTING PROTEINS AND USE THEREOF  
 8 <130> FILE REFERENCE: 58748(70342)  
 10 <140> CURRENT APPLICATION NUMBER: 10/805,684  
 11 <141> CURRENT FILING DATE: 2004-03-19  
 13 <150> PRIOR APPLICATION NUMBER: 60/455,766  
 14 <151> PRIOR FILING DATE: 2003-03-19  
 16 <150> PRIOR APPLICATION NUMBER: 60/459,936  
 17 <151> PRIOR FILING DATE: 2003-04-02  
 19 <150> PRIOR APPLICATION NUMBER: 60/460,103  
 20 <151> PRIOR FILING DATE: 2003-04-02  
 22 <160> NUMBER OF SEQ ID NOS: 161  
 24 <170> SOFTWARE: PatentIn Ver. 3.2  
 26 <210> SEQ ID NO: 1  
 27 <211> LENGTH: 150  
 28 <212> TYPE: PRT  
 29 <213> ORGANISM: Homo sapiens  
 31 <400> SEQUENCE: 1  
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 33 1 5 10 15  
 35 Thr Val Arg Val Gln Tyr Leu Glu Asp Thr Asp Pro Phe Ala Cys Ala  
 36 20 25 30  
 38 Asn Phe Pro Glu Pro Arg Arg Ala Pro Thr Cys Ser Leu Asp Gly Ala  
 39 35 40 45  
 41 Leu Pro Leu Gly Ala Gln Ile Pro Ala Val His Arg Leu Leu Gly Ala  
 42 50 55 60  
 44 Pro Leu Lys Leu Glu Asp Cys Ala Leu Gln Val Ser Pro Ser Gly Tyr  
 45 65 70 75 80  
 47 Tyr Leu Asp Thr Glu Leu Ser Leu Glu Glu Arg Glu Met Leu Glu  
 48 85 90 95  
 50 Gly Phe Tyr Glu Glu Ile Ser Lys Gly Arg Lys Pro Thr Leu Ile Leu  
 51 100 105 110  
 53 Arg Thr Gln Leu Ser Val Arg Val Asn Ala Ile Leu Glu Lys Leu Tyr  
 54 115 120 125  
 56 Ser Ser Ser Gly Pro Glu Leu Arg Arg Ser Leu Phe Ser Leu Lys Gln  
 57 130 135 140  
 59 Ile Phe Gln Glu Asp Lys  
 60 145 150  
 63 <210> SEQ ID NO: 2  
 64 <211> LENGTH: 250  
 65 <212> TYPE: PRT  
 66 <213> ORGANISM: Homo sapiens

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68 &lt;400&gt; SEQUENCE: 2

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69 Met Ala Gly Gly Glu Asp Arg Gly Asp Gly Glu Pro Val Ser Val Val
70 1      5      10      15
72 Thr Val Arg Val Gln Tyr Leu Glu Asp Thr Asp Pro Phe Ala Cys Ala
73      20      25      30
75 Asn Phe Pro Glu Pro Arg Arg Ala Pro Thr Cys Ser Leu Asp Gly Ala
76      35      40      45
78 Leu Pro Leu Gly Ala Gln Ile Pro Ala Val His Arg Leu Leu Gly Ala
79      50      55      60
81 Pro Leu Lys Leu Glu Asp Cys Ala Leu Gln Val Ser Pro Ser Gly Tyr
82 65      70      75      80
84 Tyr Leu Asp Thr Glu Leu Ser Leu Glu Glu Gln Arg Glu Met Leu Glu
85      85      90      95
87 Gly Phe Tyr Glu Glu Ile Ser Lys Gly Arg Lys Pro Thr Leu Ile Leu
88      100     105     110
90 Arg Thr Gln Leu Ser Val Arg Val Asn Ala Ile Leu Glu Lys Leu Tyr
91      115     120     125
93 Ser Ser Ser Gly Pro Glu Leu Arg Arg Ser Leu Phe Ser Leu Lys Gln
94      130     135     140
96 Ile Phe Gln Glu Asp Lys Asp Leu Val Pro Glu Phe Val His Ser Glu
97 145     150     155     160
99 Gly Leu Ser Cys Leu Ile Arg Val Gly Ala Ala Asp His Asn Tyr
100      165     170     175
102 Gln Ser Tyr Ile Leu Arg Ala Leu Gly Gln Leu Met Leu Phe Val Asp
103      180     185     190
105 Gly Met Leu Gly Val Val Ala His Ser Asp Thr Ile Gln Trp Leu Tyr
106      195     200     205
108 Thr Leu Cys Ala Ser Leu Ser Arg Leu Val Val Lys Thr Ala Leu Lys
109      210     215     220
111 Leu Leu Leu Val Phe Val Glu Tyr Ser Glu Asn Asn Ala Pro Leu Phe
112 225     230     235     240
114 Ile Arg Ala Val Asn Ser Val Ala Thr Thr
115      245     250

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118 &lt;210&gt; SEQ ID NO: 3

119 &lt;211&gt; LENGTH: 348

120 &lt;212&gt; TYPE: PRT

121 &lt;213&gt; ORGANISM: Homo sapiens

123 &lt;400&gt; SEQUENCE: 3

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124 Met Ala Gly Gly Glu Asp Arg Gly Asp Gly Glu Pro Val Ser Val Val
125 1      5      10      15
127 Thr Val Arg Val Gln Tyr Leu Glu Asp Thr Asp Pro Phe Ala Cys Ala
128      20      25      30
130 Asn Phe Pro Glu Pro Arg Arg Ala Pro Thr Cys Ser Leu Asp Gly Ala
131      35      40      45
133 Leu Pro Leu Gly Ala Gln Ile Pro Ala Val His Arg Leu Leu Gly Ala
134      50      55      60
136 Pro Leu Lys Leu Glu Asp Cys Ala Leu Gln Val Ser Pro Ser Gly Tyr
137 65      70      75      80
139 Tyr Leu Asp Thr Glu Leu Ser Leu Glu Glu Gln Arg Glu Met Leu Glu

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140          85          90          95
142 Gly Phe Tyr Glu Glu Ile Ser Lys Gly Arg Lys Pro Thr Leu Ile Leu
143          100          105          110
145 Arg Thr Gln Leu Ser Val Arg Val Asn Ala Ile Leu Glu Lys Leu Tyr
146          115          120          125
148 Ser Ser Ser Gly Pro Glu Leu Arg Arg Ser Leu Phe Ser Leu Lys Gln
149          130          135          140
151 Ile Phe Gln Glu Asp Lys Asp Leu Val Pro Glu Phe Val His Ser Glu
152 145          150          155          160
154 Gly Leu Ser Cys Leu Ile Arg Val Gly Ala Ala Ala Asp His Asn Tyr
155          165          170          175
157 Gln Ser Tyr Ile Leu Arg Ala Leu Gly Gln Leu Met Leu Phe Val Asp
158          180          185          190
160 Gly Met Leu Gly Val Val Ala His Ser Asp Thr Ile Gln Trp Leu Tyr
161          195          200          205
163 Thr Leu Cys Ala Ser Leu Ser Arg Leu Val Val Lys Thr Ala Leu Lys
164          210          215          220
166 Leu Leu Leu Val Phe Val Glu Tyr Ser Glu Asn Asn Ala Pro Leu Phe
167 225          230          235          240
169 Ile Arg Ala Val Asn Ser Val Ala Thr Thr Thr Gly Ala Pro Pro Trp
170          245          250          255
172 Ala Asn Leu Val Ser Ile Leu Glu Glu Lys Asn Gly Ala Asp Pro Glu
173          260          265          270
175 Leu Leu Val Tyr Thr Val Thr Leu Ile Asn Lys Thr Leu Ala Ala Leu
176          275          280          285
178 Pro Asp Gln Asp Ser Phe Tyr Asp Val Thr Asp Ala Leu Glu Gln Gln
179          290          295          300
181 Gly Met Asp Thr Leu Val Gln Arg His Leu Gly Thr Ala Gly Thr Asp
182 305          310          315          320
184 Val Asp Leu Arg Thr Gln Leu Val Leu Tyr Glu Asn Ala Leu Lys Leu
185          325          330          335
187 Glu Asp Gly Asp Ile Glu Glu Ala Pro Gly Ala Gly
188          340          345
191 <210> SEQ ID NO: 4
192 <211> LENGTH: 134
193 <212> TYPE: PRT
194 <213> ORGANISM: Mus musculus
196 <400> SEQUENCE: 4
197 Ile Arg Asp Glu Ser Leu Cys Ser Gln His His Glu Pro Leu Ser Leu
198 1          5          10          15
200 Phe Cys Tyr Glu Asp Gln Glu Ala Val Cys Leu Ile Cys Ala Ile Ser
201          20          25          30
203 His Thr His Arg Pro His Thr Val Val Pro Met Asp Asp Ala Thr Gln
204          35          40          45
206 Glu Tyr Lys Glu Lys Leu Gln Lys Cys Leu Glu Pro Leu Glu Gln Lys
207          50          55          60
209 Leu Gln Glu Ile Thr Cys Cys Lys Ala Ser Glu Glu Lys Lys Pro Gly
210 65          70          75          80
212 Glu Leu Lys Arg Leu Val Glu Ser Arg Arg Gln Gln Ile Leu Lys Glu

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213          85          90          95
215 Phe Glu Glu Leu His Arg Arg Leu Asp Glu Glu Gln Gln Thr Leu Leu
216          100          105          110
218 Ser Arg Leu Glu Glu Glu Glu Gln Asp Ile Leu Gln Arg Leu Arg Glu
219          115          120          125
221 Asn Ala Ala His Leu Gly
222          130
225 <210> SEQ ID NO: 5
226 <211> LENGTH: 303
227 <212> TYPE: PRT
228 <213> ORGANISM: Mus musculus
230 <400> SEQUENCE: 5
231 Glu Glu Glu Asp Asn Val Leu Val Leu Lys Lys Ser Asn Phe Glu Glu
232 1          5          10          15
234 Ala Leu Ala Ala His Lys Tyr Leu Leu Val Glu Phe Tyr Ala Pro Trp
235          20          25          30
237 Cys Gly His Cys Lys Ala Leu Ala Pro Glu Tyr Ala Lys Ala Ala Ala
238          35          40          45
240 Lys Leu Lys Ala Glu Gly Ser Glu Ile Arg Leu Ala Lys Val Asp Ala
241          50          55          60
243 Thr Glu Glu Ser Asp Leu Ala Gln Gln Tyr Gly Val Arg Gly Tyr Pro
244 65          70          75          80
246 Thr Ile Lys Phe Phe Lys Asn Gly Asp Thr Ala Ser Pro Lys Glu Tyr
247          85          90          95
249 Thr Ala Gly Arg Glu Ala Asp Asp Ile Val Asn Trp Leu Lys Lys Arg
250          100          105          110
252 Thr Gly Pro Ala Ala Thr Thr Leu Ser Asp Thr Ala Ala Ala Glu Ser
253          115          120          125
255 Leu Val Asp Ser Ser Glu Val Thr Val Ile Gly Phe Phe Lys Asp Val
256          130          135          140
258 Glu Ser Asp Ser Ala Lys Gln Phe Leu Leu Ala Ala Glu Ala Ile Asp
259 145          150          155          160
261 Asp Ile Pro Phe Gly Ile Thr Ser Asn Ser Gly Val Phe Ser Lys Tyr
262          165          170          175
264 Gln Leu Asp Lys Asp Gly Val Val Leu Phe Lys Lys Phe Asp Glu Gly
265          180          185          190
267 Arg Asn Asn Phe Glu Gly Glu Ile Thr Lys Glu Lys Leu Leu Asp Phe
268          195          200          205
270 Ile Lys His Asn Gln Leu Pro Leu Val Ile Glu Phe Thr Glu Gln Thr
271          210          215          220
273 Ala Pro Lys Ile Phe Gly Gly Glu Ile Lys Thr His Ile Leu Leu Phe
274 225          230          235          240
276 Leu Pro Arg Ser Val Ser Asp Tyr Asp Gly Lys Leu Ser Ser Phe Lys
277          245          250          255
279 Arg Ala Ala Glu Gly Phe Lys Gly Lys Ile Leu Phe Ile Phe Ile Asn
280          260          265          270
282 Ser Asp His Thr Asp Asn Gln Arg Ile Leu Glu Phe Phe Gly Leu Lys
283          275          280          285
285 Lys Glu Glu Cys Pro Ala Val Arg Leu Ile Thr Leu Glu Glu Glu

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286      290      295      300
289 <210> SEQ ID NO: 6
290 <211> LENGTH: 269
291 <212> TYPE: PRT
292 <213> ORGANISM: Mus musculus
294 <400> SEQUENCE: 6
295 Gly His Asp Ser Ser Leu Phe Glu Asp Arg Ser Asp His Asp Lys His
296   1          5          10          15
298 Lys Asp Arg Lys Arg Lys Lys Arg Lys Lys Gly Glu Lys Gln Ala Pro
299          20          25          30
301 Gly Glu Glu Lys Gly Arg Lys Arg Arg Arg Val Lys Glu Asp Lys Lys
302          35          40          45
304 Lys Arg Asp Arg Asp Arg Ala Glu Asn Glu Val Asp Arg Asp Leu Gln
305          50          55          60
307 Cys His Val Pro Ile Arg Leu Asp Leu Pro Pro Glu Lys Pro Leu Thr
308   65          70          75          80
310 Ser Ser Leu Ala Lys Gln Glu Glu Val Glu Gln Thr Pro Leu Gln Glu
311          85          90          95
313 Ala Leu Asn Gln Leu Met Arg Gln Leu Gln Ser Thr Met Lys Glu Lys
314          100         105         110
316 Ile Lys Asn Asn Asp Tyr Gln Ser Ile Glu Glu Leu Lys Asp Asn Phe
317          115         120         125
319 Lys Leu Met Cys Thr Asn Ala Met Ile Tyr Asn Lys Pro Glu Thr Ile
320          130         135         140
322 Tyr Tyr Lys Ala Ala Lys Lys Leu Leu His Ser Gly Met Lys Ile Leu
323 145          150         155         160
325 Ser Gln Glu Arg Ile Gln Ser Leu Lys Gln Ser Ile Asp Phe Met Ser
326          165         170         175
328 Asp Leu Gln Lys Thr Arg Lys Gln Lys Glu Arg Thr Asp Ala Cys Gln
329          180         185         190
331 Ser Gly Glu Asp Ser Gly Cys Trp Gln Arg Glu Arg Glu Asp Ser Gly
332          195         200         205
334 Asp Ala Glu Thr Gln Ala Phe Arg Ser Pro Ala Lys Asp Asn Lys Arg
335          210         215         220
337 Lys Asp Arg Asp Val Leu Glu Asp Lys Trp Arg Ser Ser Asn Ser Glu
338 225          230         235         240
340 Arg Glu His Glu Gln Ile Glu Arg Val Val Gln Glu Ser Gly Gly Lys
341          245         250         255
343 Leu Thr Arg Arg Leu Ala Asn Ser Gln Cys Glu Phe Glu
344          260         265
347 <210> SEQ ID NO: 7
348 <211> LENGTH: 224
349 <212> TYPE: PRT
350 <213> ORGANISM: Mus musculus
352 <400> SEQUENCE: 7
353 Asn Asp Trp Ala Ala Leu Leu Glu Leu Trp Asp Lys Cys Gln His Gln
354   1          5          10          15
356 Tyr Arg Gln Cys Leu Asp Phe His Leu Phe Tyr Arg Asp Ser Glu Gln
357          20          25          30

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RAW SEQUENCE LISTING ERROR SUMMARY

DATE: 10/29/2004

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Output Set: N:\CRF4\10292004\J805684.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:105; Xaa Pos. 51

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/805,684

DATE: 10/29/2004

TIME: 08:17:01

Input Set : D:\58770342.app

Output Set: N:\CRF4\10292004\J805684.raw

L:10353 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:105 after pos.:48